

**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

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Claim 1 (withdrawn): A memory system comprising:  
a plurality of storage cells that each store a data value; and  
a memory control system that identifies particular ones of said storage cells as targets of read and write commands;  
wherein data values written to ones of said plurality of storage cells identified by said memory control system identify tasks to be performed later;  
wherein said memory control system determines an order of performing said tasks by controlling an order of reading data values from said plurality of storage cells;  
wherein said memory control system reads out said data values so that a selected task is performed n times if and only if all other ones of said tasks have been performed n-1 times; and  
wherein said memory control system allocates only one storage cell per task even if tasks are performed repeatedly.

Claim 2 (withdrawn): The memory system of claim 1 wherein said memory control system overwrites an oldest previously stored data value with a new data value.

Claim 3 (withdrawn): The memory system of claim 1 wherein said memory control system comprises:  
a write pointer that identifies a next storage cell to be written to; and  
a plurality of read pointers identifying a next storage cell to be read from, each of said plurality of read pointers associated with one of a plurality of priority levels.

Claim 4 (withdrawn): The memory system of claim 3 wherein said memory control system further comprises:  
a plurality of registers, each of said registers identifying a number of storage cells implementing a particular list associated with one of said plurality of priority levels; .

Claim 5 (withdrawn): The memory system of claim 4 wherein one of said plurality of registers associated with a highest priority lists increments after each write operation.

Claim 6 (withdrawn): The memory system of claim 5 wherein said memory control system selects a particular storage cell for reading based on a value of a particular read pointer associated with a particular priority level.

Claim 7 (withdrawn): The memory system of claim 6 wherein said memory control system changes said current priority level to a next lower priority level when said register associated with said current priority level is zero and said register associated with said next lower priority level has a value greater than zero.

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Claim 8 (withdrawn): The memory system of claim 6 wherein a register associated with a priority level one lower than a current priority level is decremented after a write operation that overwrites a value that has been read out using said read pointer associated with said current priority level.

Claim 9 (withdrawn): The memory system of claim 8 wherein said register associated with said priority level one lower than said current priority level decrements below zero.

Claim 10 (withdrawn): The memory system of claim 3 wherein said plurality of storage cells are each identified by a location in a circular address space and said write pointer and said read pointers store addresses in said address space.

Claim 11 (withdrawn): The memory system of claim 1 wherein said tasks comprise retransmissions of data in a communication system.

Claim 12 (withdrawn): The memory system of claim 1 wherein said tasks comprise requests for retransmission of data in a communication system.

Claim 13 (withdrawn): A memory system comprising:  
a plurality of storage cells that each store a data value; and  
a memory control system that identifies particular ones of said storage cells as targets of read and write commands;  
wherein said memory control system determines an order of reading data values from said plurality of storage cells;  
wherein said memory control system reads out said data values so that a data value is read out  $n$  times if and only if all other ones of said data values have been read out  $n-1$  times; and  
wherein said memory control system allocates only one storage cell per data value.

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Claim 14 (currently amended): A method for operating a memory device including a plurality of storage cells:  
dynamically partitioning said memory device into a plurality of priority lists;  
directing new data to be stored in said memory device to storage cells belonging to a highest priority list of said plurality of priority lists;  
reading data from said memory device only from a highest priority non-empty priority list; and  
transferring said data read from said memory device from said highest priority non-empty priority list to a next lower priority list after reading without movement between storage cells;  
and  
wherein after reading said data and transferring said data, said data is maintained on said next lower priority list within said memory device.

Claim 15 (original): The method of claim 14 wherein dynamically partitioning comprises:  
providing a write pointer and a plurality of read pointers each of said read pointers corresponding to one of a plurality of priority levels.

Claim 16 (original): The method of claim 15 wherein directing comprises:  
writing data to a location in said memory device determined by said write pointer and  
thereafter incrementing said write pointer.

Claim 17 (original): The method of claim 15 wherein reading comprises:  
reading data from a location in said memory device determined by one of said plurality of  
read pointers corresponding to said highest priority non-empty priority list.

Claim 18 (original): The method of claim 17 wherein dynamically partitioning further  
comprises:  
providing for each of said priority lists a count register indicating an allocated number of  
storage cells.

Claim 19 (original): The method of claim 18 wherein transferring comprises:  
incrementing said read pointer corresponding to said highest priority non-empty priority  
list;  
decrementing one of said count registers corresponding to said highest priority non-empty  
priority list; and  
incrementing one of said count registers corresponding to a next highest priority priority  
list.

Claim 20 (original): The method of claim 14 wherein said count register corresponding  
to said next highest priority priority list is incremented only after a delay.

Claim 21 (currently amended): Apparatus for operating a memory device including a  
plurality of storage cells:  
means for dynamically partitioning said memory device into a plurality of priority lists;  
means for directing new data to be stored in said memory device to storage cells  
belonging to a highest priority list of said plurality of priority lists;

means for reading data from said memory device only from a highest priority non-empty priority list; and

means for transferring said data read from said memory device from said highest priority non-empty priority list to a next lower priority list after reading without movement between storage cells; and

wherein after reading said data and transferring said data, said data is maintained on said next lower priority list within said memory device.

Claim 22 (previously presented): The apparatus of claim 21 wherein said means for dynamically partitioning comprises:

means for providing a write pointer and a plurality of read pointers each of said read pointers corresponding to one of a plurality of priority levels.

Claim 23 (previously presented): The apparatus of claim 22 wherein means for directing comprises:

means for writing data to a location in said memory device determined by said write pointer and thereafter incrementing said write pointer.

Claim 24 (previously presented): The apparatus of claim 22 wherein said means for reading comprises:

means for reading data from a location in said memory device determined by one of said plurality of read pointers corresponding to said highest priority non-empty priority list.

Claim 25 (previously presented): The apparatus of claim 24 wherein said means for dynamically partitioning further comprises:

means for providing for each of said priority lists a count register indicating an allocated number of storage cells.

Claim 26 (previously presented): The apparatus of claim 25 wherein said means for transferring comprises:

means for incrementing said read pointer corresponding to said highest priority non-empty priority list;

means for decrementing one of said count registers corresponding to said highest priority non-empty priority list; and

means for incrementing one of said count registers corresponding to a next highest priority priority list.

Claim 27 (currently amended): ~~Apparatus method~~ The apparatus of claim ~~21~~ 26 wherein said count register corresponding to said next highest priority priority list is incremented only after a delay.

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Claim 28 (new): The method of claim 14 wherein said data read from said memory device represents a retransmission task.

Claim 29 (new): The apparatus of claim 29 wherein said data read from said memory device represents a retransmission task.

Claim 30 (new): Apparatus for storing data, said apparatus comprising:  
a memory device dynamically partitioned into a plurality of priority lists, wherein new data to be stored in said memory device is directed to storage cells belonging to a highest priority list of said plurality of priority lists; and

a memory control engine that reads data from said memory device only from a highest priority non-empty priority list, transfers said data read from said memory device from said highest priority non-empty priority list to a next lower priority list after reading without movement between storage cells; and

wherein after reading said data and transferring said data, said data is maintained on said next lower priority list.

Claim 31 (new): The apparatus of claim 30 wherein said memory control engine comprises:

a write pointer and a plurality of read pointers each of said read pointers corresponding to one of a plurality of priority levels.

Claim 32 (new): The apparatus of claim 30 wherein said memory control engine further comprises:

a count register for each of said priority lists indicating an allocated number of storage cells.

Claim 33 (new): The apparatus of claim 32 wherein said count register corresponding to said next highest priority list is incremented only after a delay.

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